

Instructor: C. L. Adair

Office: Hodge Room 220

Office Hours: TTh 2:00 p.m. – 2:50 p.m.; after 5:45 pm on TTh by appointment.

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Text: *Thinking mathematically, 4th Edition* by Blitzer

SMTH 120. College Mathematics (3) Linear equations and inequalities, exponential equations, mathematics of finance, fundamental set theory, fundamentals of probability and statistics. This course may not be used to satisfy any prerequisite requirement for higher-numbered mathematics courses.

Prerequisites: *appropriate score on placement test and high school Algebra I and II.*

Blackboard: <http://blackboard.sc.edu>

All assignments and handouts for this class are posted on Blackboard. If you don't know your username, you can find it in VIP under the Technology menu. On this menu, click on the SHOW ME button as described below:

Blackboard Username Lookup/Password Set:

If you do not know your USC Network Username/PW combination (or if you have forgotten your password), follow the instructions below. Please note that your instructor will notify you if Blackboard is being used in conjunction with a course.

- Login to VIP (<http://vip.sc.edu>)
(Forget your PIN ? Students should contact the Registrar's Office; faculty/staff should contact your departmental Human Resources representative)
- Click on the **Technology** link
- Click on **Show Me Network Username**
Your USC Network Username will be displayed and you will be prompted to choose your password. You must type in the password twice to verify your choice.
- Click on the **SET PASSWORD** button to set your new password

Password Rules:

Legal passwords can be a minimum of 5 characters and a maximum of 14. They can contain any alphanumeric character (A-Z/0-9) and the \$ sign. Case doesn't matter. Your password will expire every six months, or six months from the last time you re-set or change it (unless your departmental network manager has selected another expiration interval for your department -- check with your network manager for expiration rules for your unit).

Password Security:

If you enter your password incorrectly seven times when attempting to login, you will be locked out of Blackboard temporarily (this is a security feature for your protection). To get back in immediately, just go to VIP and return to the Technology link to re-set your password. **Change your password often to protect yourself.** You can also return to VIP/Technology link if you forget your password and need to re-set it.

Course Goals:

1. To develop an understanding of linear equations and inequalities, exponential equations, mathematics of finance, fundamental set theory, and fundamentals of probability and statistics.
2. To improve proficiency in oral and written mathematical communication.
3. To develop the ability explain the reasoning behind mathematical relationships.
4. To cultivate an inquiring disposition toward mathematics.

MyMathLab:

You will need to go to <http://www.coursecompass.com/> and register. On the page below under Students, click on Register.



Follow the directions to complete the process. The course ID for this class is adair82261. The Student Access Code is found in your Student Access Kit that accompanies the text.

Course ID adair82261



Homework:

Homework will be collected on a daily basis. Three problems will be chosen at random for grading (one from the beginning, one from the middle, and one from the end of the list of assigned problems). The following rubric will be used: 1 point for copying the problem correctly, 2 points for copying the problem and attempting a solution which is incorrect, 3 points for a solution that is in the right direction but contains significant errors, 4 points for a solution that is correct except for a minor error, 5 points for a correct solution. Homework must be done in **pencil** and must be neat in order to be accepted for grading.

Homework must be submitted at the beginning of class, unfolded with multiple pages stapled. Late homework will not be accepted. The homework grade will account for 10% of your final grade in this class.

Daily Quizzes:

There will be a five-minute quiz each class period consisting of one fill-in-the-blank question and one homework problem from the assignment submitted the previous day of class. The fill-in-the-blank question tests knowledge of definitions, terminology, and theorems. The daily quiz average will count as the equivalent of an hour test - 15% of the final grade. (No makeups are given - absences count as 0. The four lowest grades are dropped in computing the quiz average at the end.)

Honor Code:

Your grade on everything in the course is to be based on your own work. Cheating in any form is a violation of the honor code (available in the student handbook), and will be reported to the Dean of Students. A first offense will result in a zero for the exercise/test. If the offense is not the first (whether in this class or another) the consequence will likely be more severe, including possible failure for the course.

Students who admit responsibility or who are found responsible for an academic integrity violation through the Student Code of Conduct will receive the appropriate grade determined by the professor, which may include an X to signify academic dishonesty. Grades with an X are not subject to grade forgiveness.

Evaluation of Student Performance:

Performance evaluations will be based on the items listed above and on test performance according to the listing below:

1. Homework - 10%
2. Hour tests - 60%

There will be three hour tests. Dates for these are also indicated on the attached schedule. The daily quiz average counts as an hour test. Each hour test (including the daily quiz average as an hour test) is 15% of the final grade.

3. Final Examination - 30%

There will be a cumulative, comprehensive final examination. No one will be exempted from the final examination.

Grading Scale:

90 - 100	A
86 - 89	B+
80 - 85	B
76 - 79	C+
70 - 75	C
66 - 69	D+
60 - 65	D
Below 60	F

Math Lab:

The Mathematics Tutoring Lab offers **free** help to students. It is Located in Hodge 242.

Necessary Calculator:

You will need a calculator that can do exponentials and logarithms. A graphing calculator - it can be any brand you like – would be very useful. The Texas Instruments TI-83 Plus graphing calculator will be used for class instruction.

Additional Notes:

1. Class attendance will be strictly enforced. More than four absences will automatically result in a grade of F .
2. No make-ups will be given on hour tests without an acceptable written excuse. No makeups are given on any daily quiz.
3. Homework must be submitted on the due date at the beginning of the class period in order to receive credit.
4. If a student is absent, it is the student's responsibility to get the assignment for that day from Blackboard.
5. No cell phones or PDA's are allowed in class. **All cell phones and PDA's must be turned off prior to entering the classroom.**

Tentative Course Outline

Week of	Topics	Relevant Text Sections
Aug. 23	Course introduction. Inductive and deductive reasoning	Chapter 1, Section 1
Aug. 28	Estimation in problem solving Estimations from graphs Modeling with mathematics	Chapter 1, Section 2
	Problem solving using Polya's four steps	Chapter 1, Section 3
	Basic set concepts Subsets	Chapter 2, Sections 1-2
Sept. 4	Venn diagrams Set operations	Chapter 2, Sections 3-4
	Applications of sets	Chapter 2, Sections 4-5
Sept. 11	Algebraic expressions and formulas Linear equations in one variable	Chapter 6, Sections 1-2
	Applications of linear equations	Chapter 6, Sections 2-3
Sept. 18	Ratio, proportion, and variation Linear inequalities in one variable	Chapter 6, Sections 4-5
	Graphing and functions	Chapter 6, Section 5 Chapter 7, Section 1
Sept. 25	Linear functions and their graphs	Chapter 7, Section 2
	Test 1 on Sept. 27	
Oct. 2	Systems of linear equations in two variables Linear inequalities in two variables	Chapter 7, Sections 3-4
	Linear programming	Chapter 7, Section 5
Oct. 9	Approximating reality with nonlinear models	Chapter 7, Section 6
	<i>Oct. 11 – Fall Break</i>	
Oct. 16	Percent, sales tax, and income tax	Chapter 8, Section 1
	Simple interest	Chapter 8, Section 2
	Compound interest	Chapter 8, Section 3
Oct. 23	Annuities, stocks and bonds	Chapter 8, Section 4
	Test 2 on Oct. 25	
Oct. 30	Installment buying	Chapter 8, Section 5
	Amortization	Chapter 8, Section 6
Nov. 6	Fundamental Counting Principle Permutations	Chapter 11, Sections 1-2
	Combinations	Chapter 11, Sections 2-3
Nov. 13	Basics of probability – theoretical and empirical	Chapter 11, Section 4
	Applications of probability Probability of complements and unions of events Odds	Chapter 11, Sections 5-6

Nov. 20	Probability of intersections of events Conditional probability Expected value <i>Nov. 22 – Thanksgiving Holiday</i>	Chapter 11, Sections 7-8
Nov. 27	Sampling, frequency distributions, and graphs Test 3 on Nov. 29	Chapter 12, Section 1
Dec. 4	Measures of central tendency Measures of dispersion <i>Dec. 6 is the last class.</i>	Chapter 12, Sections 2-3
Dec. 7	Last Day of All Classes	
Final Examination Friday, December 14, 3:00 p.m. – 6:00 p.m.		

Dates to Remember:

Last day to drop/add – August 27

Last day to withdraw without penalty – November 1